

WHAT IS CLAIMED IS:

1. A memory device comprising:

hysteretic capacitance means; and

5 a read circuit applying a bias voltage to said capacitance means in different directions in a first time and a second time of data reading respectively for defining read data by comparing first read data and second read data with each other.

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2. The memory device according to claim 1, wherein

said read circuit defines said read data on the basis of a variation of the potential of a bit line corresponding to said first read data and a variation of the potential of a bit line corresponding to said second read data.

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3. The memory device according to claim 2, wherein

said read circuit includes a first circuit part

20 detecting said variation of the potential of said bit line corresponding to said first read data and a second circuit part detecting said variation of the potential of said bit line corresponding to said second read data.

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4. The memory device according to claim 3, wherein

said first circuit part includes a first transistor connected to said bit line for entering an ON state in said first time of said data reading and entering an OFF state in said second time of said data reading, and

5        said second circuit part includes a second transistor connected to said bit line for entering an ON state in said second time of said data reading and entering an OFF state in said first time of said data reading.

10        5. The memory device according to claim 1, wherein said read circuit includes a resistance dividing circuit for generating a reference potential consisting of a first potential.

15        6. The memory device according to claim 5, wherein said read circuit defines said read data on the basis of the difference between a variation of the potential of a bit line corresponding to said first read data and a variation of the potential of a bit line corresponding to  
20        said second read data and said reference potential consisting of said first potential generated by said resistance dividing circuit.

25        7. The memory device according to claim 6, wherein said read circuit includes a comparator comparing the

difference between said variation of the potential of said bit line corresponding to said first read data and said variation of the potential of said bit line corresponding to said second read data and said reference potential generated by said resistance dividing circuit with each other.

8. The memory device according to claim 7, wherein said comparator includes a first input terminal supplied with said reference potential and a second input terminal connected with a node,

said resistance dividing circuit also generates a second potential in addition to said reference potential consisting of said first potential, and said second potential is applied to said node connected with said second input terminal of said comparator as an initial potential.

9. The memory device according to claim 8, wherein said read circuit includes a third transistor connected between a portion of said resistance dividing circuit generating said second potential and said node connected with said second input terminal of said comparator for entering an ON state in an initial state and entering an OFF state in said data reading.

10. The memory device according to claim 8, wherein  
said reference potential is set to an intermediate  
level between a potential obtained by adding the  
5 difference between said variation of the potential of said  
bit line corresponding to said first read data and said  
variation of the potential of said bit line corresponding  
to said second read data with reference to initial data  
formed by first data to said initial potential of said  
10 node and a potential obtained by adding the difference  
between said variation of the potential of said bit line  
corresponding to said first read data and said variation  
of the potential of said bit line corresponding to said  
second read data with reference to initial data formed by  
15 second data to said initial potential of said node.

11. The memory device according to claim 1, wherein  
first said bias voltage and second said bias voltage  
applied to said capacitance means in said data reading are  
20 voltages, reversed in polarity to each other, having  
substantially equal absolute values.

12. The memory device according to claim 1, wherein  
the hysteresis curve of said capacitance means is  
25 substantially symmetrical with respect to the origin.

13. The memory device according to claim 1, wherein  
said hysteretic capacitance means includes a  
ferroelectric capacitor.

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14. The memory device according to claim 13, wherein  
said ferroelectric capacitor consists of a bit line,  
a word line and a ferroelectric film arranged between said  
bit line and said word line,

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said memory device further comprising memory cells  
each consisting of said ferroelectric capacitor.

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15. The memory device according to claim 14, wherein  
a voltage  $n/m$  times said bias voltage, where  $m > n$ ,  
is applied to memory cells other than selected said memory  
cell in said data reading.

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16. The memory device according to claim 13, further  
comprising memory cells each consisting of a single said  
ferroelectric capacitor and a single transistor connected  
to said ferroelectric capacitor.